

UNITED STATES GOVERNMENT

Memorandum

DR7 00712

TO : Mr. D. C. Hutchison, Chief
Technical Information Division

DATE: June 7, 1967

FROM : Dr. F. Kalil
Mission Analysis Office

SUBJECT: Release of all Reports by Hughes Aircraft Company on
Contract NAS5-9637

With the concurrence of Dr. F. O. Vonbun, Chief, Mission Analysis Office, I am herewith authorizing you to release all reports by the Hughes Aircraft Company on Contract NAS5-9637, in accordance with the attached Document Release Form.

STANDARD
PUBLICATIONS
AVAILABLE

In addition to a final report scheduled to be published in FY 1968, the Hughes Aircraft Company publishes a progress report quarterly. Six quarterly progress reports have been published to date. These reports bear the general title, "Parametric Analysis of Microwave and Laser Systems for Communication and Tracking." According to Article II of the Contract, the Technical Information Division receives four copies of the reports on this Contract.

all Repts.
by Hughes
aircraft Co.
on this
contract

Also, please act on the request in the attached letter.

F. Kalil

Ford Kalil
Staff Member
Mission Analysis Office

Enclosures

507-FK:hs
052.05.27

*Facility
Note*

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DRF-00712

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771

To: Distribution

Subject: Fifth Quarterly Report for "Parametric Analysis of Microwave and Laser Systems for Communication and Tracking," 6 September 1966 to 6 December 1966, Report No. P66-09, by Hughes Aircraft Company, Culver City, California, Contract No NAS5-9637, for Goddard Space Flight Center, Greenbelt, Maryland

The subject report is distributed herewith for your information and retention.

A summary of the work to date is contained in the pages iii through xxxi, which precede the report proper. The summary contains a determination of the optimum set of parameters for a space communication system operating at nominal Earth-Mars distances.

This report presents the results for the fifth quarter (6 September 1966 to 6 December 1966) of a study by Hughes Aircraft Company for the Goddard Space Flight Center (Contract NAS5-9637). The purpose of the study is to: (1) study and analyze the advantages and disadvantages of optical, millimeter and microwave telecommunication systems; (2) perform parametric and trade-off studies to determine the "best" system for future manned and unmanned planetary missions; (3) provide the mission planner with a "Reference Data for Advanced Space Communication and Tracking Systems."

The study was to be conducted in two phases (Phase I and Phase II), and is now in Phase II.

This submittal follows the Program Plan developed by the contractor under Phase I which was approved by the Goddard Space Flight Center, wherein it was recommended that selected sections of the report, which were prepared and submitted upon completion of Phase I, be updated each quarter of Phase II in lieu of a routine "progress" report. Accordingly, the contractor has prepared six (6) revised sections numbered 1, 2, 3, 10, 11, and 13, and is submitting the revised sections in satisfaction of the requirements for the quarterly report due 27 January 1967. These updates now complete the first edition of the "Reference Data for Advanced Space Communication and Tracking Systems."

It is suggested that custodians of the Phase I volume remove the sections dated 6 February 1966 and substitute in lieu thereof the aforesaid sections which are dated 6 September 1966. The revised sections have been collated and bound in a loose leaf spiral identified on the cover as the Fourth Quarterly Report only for the purpose of facilitating handling. Each revised section is complete with a new tabbed divider.

F. Kalil

Ford Kalil
Staff Member, Mission Analysis Office
Tracking and Data Systems Directorate

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